

AMENDMENTS

In the Claims

1-17. (Cancelled)

18. (Currently Amended) A method comprising:

executing one or more tasks within each of a plurality of nodes of a network ~~to~~

~~dynamically generate~~; wherein

said plurality of nodes are interconnected by one or more links,

said executing comprises

generating

first data identifying at least one node of said plurality of nodes at
which, said first data comprising at least one of:

insert data is added, wherein said insert data is data

associated with said each of said plurality of nodes,
and

dropped data is deleted, wherein said dropped data is data
associated with said each of said plurality of nodes,
and

second data indicating a format of in-transit data being transmitted
over said network, and

requesting, from at least one other node of said plurality of nodes, a

format of data over a link of said one or more links attached to

said at least one other node of said plurality of nodes, and

said second data is configured to indicate a format of in-transit data being
transmitted over said one or more links;

~~dynamically~~ identifying a destination node of said in-transit data; ~~[[and]]~~

transmitting said in-transit data to said destination node using said first data and said
second data; and

identifying said plurality of nodes of said network.

19.-20. (Cancelled)

21. **(Currently Amended)** The method of claim ~~[[19]]~~ 18, wherein said insert data comprises, data received by said each of said plurality of nodes from said network, and said dropped data comprises data transmitted from said each of said plurality of nodes to said network.
22. **(Currently Amended)** The method of claim ~~[[19]]~~ 18, wherein said executing comprises requesting at least one of:
said insert data from said node of said plurality of nodes at which insert data is being added; and
said dropped data from said node of said plurality of nodes at which dropped data is being deleted.
23. **(Cancelled)**
24. **(Currently Amended)** The method of claim ~~[[23]]~~ 18, wherein said requesting comprises:
requesting at least one of a synchronous transport signal type data and a synchronous transport module type data.
25. **(Currently Amended)** The method of claim ~~[[20]]~~ 18, wherein said network satisfies at least one of:
a first condition wherein, to prevent misconnection in case of failure, traffic is:
switched by dispatching said in-transit data from a failed link to a redundant link and
squelched between said one or more links, and
a second condition wherein said in-transit data being transmitted over each of said one or more links is re-transmitted in data buckets to at least one predetermined node from said network at regular intervals of time.
26. **(Previously Presented)** The method of claim 25, wherein,
said network satisfies said first condition, and
said executing one or more tasks within each of said plurality of nodes to generate said first data comprises,

performing squelching to prevent misconnection.

27. (Previously Presented) The method of claim 25, wherein,
said network satisfies said second condition, and
said executing one or more tasks within each of said plurality of nodes to generate said
first data comprises,
for each data bucket, identifying at least one of:
said plurality of nodes on which insert data is being added via said each data
bucket; and
said plurality of nodes on which dropped data is being deleted via said each data
bucket.
28. (Currently Amended) The method of claim ~~[[19]]~~ **18**, further comprising:
detecting a failure on a first link of said one or more links on said node of said plurality
of nodes communicating said in-transit data;
identifying a redundant link from said node communicating said in-transit data to said
destination node; and
switching traffic in response to said detecting by switching said in-transit data from said
first link to said redundant link of said one or more links.
29. (Previously Presented) The method of claim 28, wherein said executing one or more tasks
within each of said plurality of nodes comprises executing said one or more tasks within each of
said plurality of nodes before said failure occurs.
30. (Currently Amended) An apparatus comprising:
means for identifying a plurality of nodes of a network, wherein said plurality of nodes
are interconnected by one or more links; ~~[[and]]~~
means for executing one or more tasks within each of said plurality of nodes ~~to~~
~~dynamically generate: , wherein~~
means for executing comprises means for generating
first data identifying at least one node of said plurality of nodes at which,
insert data is added, wherein said insert data is data associated with
said each of said plurality of nodes, or

erase is deleted, wherein said dropped data is data associated with
 said each of said plurality of nodes[[]] , and
 second data indicating a format of in-transit data being transmitted over
 said one or more links, and
said insert data and said dropped data comprise at least one of
data received by said each of said plurality of nodes from said
network, and
data transmitted by said each of said plurality of nodes to said
network;

means for ~~dynamically~~ identifying a destination node of said in-transit data; [[and]]
 means for transmitting said in-transit data to said destination node using said first data
 and said second data; and

means for requesting, from at least one other node of said plurality of nodes, a
format of data being transmitted over a link of said one or more links
attached to said at least one other node of said plurality of nodes.

31. (Cancelled)

32. (Currently Amended) The apparatus of claim [[31]] 30, wherein said means for
 executing comprises:

means for requesting, said insert data from said node of said plurality of nodes at which
 insert data is being added; and

means for requesting said dropped data from said node of said plurality of nodes at which
 dropped data is being deleted.

33. (Cancelled)

34. (Currently Amended) The apparatus of claim [[33]] 30, wherein said means for
 requesting comprises:

means for requesting at least one of a synchronous transport signal type data and a
 synchronous transport module type data.

35. **(Currently Amended)** The apparatus of claim ~~[[31]]~~ 30, wherein said network satisfies at least one of:

a first condition wherein, to prevent misconnection in case of failure, traffic is:

switched by dispatching said in-transit data from a failed link to a redundant link and

squelched between said one or more links; and

a second condition wherein said in-transit data being transmitted over each of said one or more links is re-transmitted in data buckets to at least one predetermined node from said network at regular intervals of time.

36. **(Previously Presented)** The apparatus of claim 35, wherein, said network satisfies said first condition, and said means for executing one or more tasks within each of said plurality of nodes to generate said first data comprises, means for performing squelching to prevent misconnection.

37. **(Previously Presented)** The apparatus of claim 35, wherein, said network satisfies said second condition, and said means for executing one or more tasks within each of said plurality of nodes to generate said first data comprises, for each data bucket, means for identifying: at least one of said plurality of nodes on which insert data is being added via said each data bucket; or at least one of said plurality of nodes on which dropped data is being deleted via said each data bucket.

38. **(Currently Amended)** The apparatus of claim ~~[[31]]~~ 30, further comprising: means for detecting a failure on a first link of said one or more links on said node of said plurality of nodes communicating said in-transit data; means for identifying a redundant link from said node communicating said in-transit data to said destination node; and means for switching traffic in response to said detecting by switching said in-transit data from said first link to said redundant link.

39. (Previously Presented) The apparatus of claim 38, wherein said means for executing one or more tasks within each of said plurality of nodes comprises means for executing said one or more tasks within each of said plurality of nodes before said failure occurs.

40. (Currently Amended) A network node comprising:

an interface to couple said network node to a network, wherein said network comprises a plurality of nodes interconnected by one or more links and said plurality of nodes comprises said network node;

a timing communications and control processor configured to:

identify said plurality of nodes, and

execute one or more tasks within network node ~~to dynamically generate~~ ;

wherein

said timing communications and control processor is configured to

perform said execution by virtue of being configured to

generate

first data identifying at least one node of said plurality of nodes at which,

insert data is added, wherein said insert data is data associated with said each of said plurality of nodes; or

dropped data is deleted, wherein said dropped data is data associated with said each of said plurality of nodes, and

second data indicating a format of in-transit data being transmitted over said one or more links, and

said insert data and said dropped data comprise at least one of

data received by said each of said plurality of nodes from said network, and

data transmitted by said each of said plurality of nodes to said network;

~~dynamically~~ identify a destination node of said in-transit data; ~~[[and]]~~

communicate said in-transit data to said destination node using said first data and said second data; and

request, from at least one other node of said plurality of nodes, a format of data being transmitted over a link of said one or more links attached to said at least one other node of said plurality of nodes.

41. (Cancelled)

42. (Currently Amended) The network node of claim ~~[[41]]~~ 40, wherein said timing communications and control processor configured to execute one or more tasks comprises:

a timing communications and control processor configured to:

request, from at least one other node of said plurality of nodes, said insert data from said node of said plurality of nodes at which insert data is being added and said dropped data from said node of said plurality of nodes at which dropped data is being deleted.

43. (Cancelled)

44. (Currently Amended) A machine-readable storage medium having a plurality of instructions executable by a machine embodied therein, wherein said plurality of instructions when executed are configured to cause said machine to perform a method comprising:

identifying a plurality of nodes of a network, wherein said plurality of nodes are interconnected by one or more links; and

executing one or more tasks within each of said plurality of nodes to ~~dynamically~~ generate:

first data identifying at least one node of said plurality of nodes at which,

insert data is added wherein said insert data is data associated with said each of said plurality of nodes, or

dropped data is deleted wherein said dropped data is data associated with said each of said plurality of nodes, and

second data indicating a format of in-transit data being transmitted over said one or more links;

~~dynamically~~ identifying a destination node of said in-transit data; ~~[[and]]~~

communicating said in-transit data to said destination node using said first data and said second data; and

requesting, from at least one other node of said plurality of nodes, data indicating a format of data being transmitted over a link of said one or more links attached to said at least one other node of said plurality of nodes.

45. (Previously Presented) The machine-readable storage medium of claim 44, wherein said insert data and said dropped data comprises at least one of, data received by said each of said plurality of nodes from said network, and data transmitted by said each of said plurality of nodes to said network.

46. (Previously Presented) The machine-readable storage medium of claim 45, wherein said executing comprises:

requesting, from at least one other node of said plurality of nodes, said insert data from said node of said plurality of nodes at which insert data is being added and said dropped data from said node of said plurality of nodes at which said dropped data is being deleted.

47. (Cancelled)